



1150137 - R8 SDMS

August 16, 2006

Sent via email

Eric Johnson  
U.S. Environmental Protection Agency  
Region 8, 8ENF-T  
999 18<sup>th</sup> Street, Suite 300  
Denver, Colorado 80202-2466

RE: Progress report for July 2006 activities - Hecla Mining Company Apex Site (EPA ID No. UT982589848, Docket No. RCRA-8-99-06)

Dear Mr. Johnson:

Per paragraph 64 of the Order, enclosed is a copy of the July 2006 progress report for your records.

If you have any questions please do not hesitate to call me at (208) 769-4112 or e-mail at [pglader@hecla-mining.com](mailto:pglader@hecla-mining.com).

Sincerely,

A handwritten signature in black ink, appearing to read "Glader", written over a horizontal line.

Paul L. Glader  
Manager Environmental Services

Encl

Cc: HMC Legal Dept (w/o attachments)  
John Jacus, Esq. (DG&S)



August 16, 2006

Sent via U.S. Mail

Glenn Rogers, Chairman.  
Shivwits Band of Paiute Indian Tribe  
P.O. Box 448  
Santa Clara, Utah 84765

John Krause  
Bureau of Indian Affairs Phoenix Area Office  
U.S. Department of Interior  
P.O. Box 10  
Phoenix, AZ 85001

Kelly Youngbear  
BIA Southern Paiute Agency  
P.O. Box 720  
St. George, UT 84771

RE: Progress report for July 2006 activities - Hecla Mining Company Apex Site (EPA ID  
No. UT982589848, Docket No. RCRA-8-99-06)

Dear Chairman Rogers, Mr. Krause and Ms. Youngbear:

Per paragraph 64 of the Order, enclosed is a copy of the July 2006 progress report for your records.

If you have any questions please do not hesitate to call me at (208) 769-4112 or e-mail at [plader@hecla-mining.com](mailto:plader@hecla-mining.com).

Sincerely,

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Paul L. Glader  
Manager Environmental Services

Encl

Cc: HMC Legal Dept. (w/o attachments)  
John Jacus, Esq. (DG&S) (w/o attachments)  
Eric Johnson (USEPA, Region VIII) (w/o attachments)



August 16, 2006

**MEMORANDUM TO:** Apex File  
**COPIES TO:** distribution  
**FROM:** Paul Glader *PG*  
**SUBJECT:** Progress Report No. 27 for period ending July 31, 2006;  
Pond 2 Final Closure - Apex Site, Washington County, Utah

**Summary**

The seventh visual inspection, per the long term monitoring plan, was conducted on August 3rd. No unusual conditions were noted, some salt formation was noted near the toe of the rock-armored out slopes. Further investigation identified the source as recent rainfall contacting the natural mineralization contained in the site-sourced construction material. Some minor erosion maintenance will be scheduled for late summer.

The settlement monuments were surveyed on June 6th and July 10th - no appreciable settlement has been noted. Settlement analysis will now take place on a quarterly basis.

## **Major Issues**

1. During the period of post closure long term monitoring, the Hecla representative will be Paul Glader, Manager of Environmental Services. Paul's contact information includes: Work Telephone - 208.769.4112, email address – pglader@hecla-mining.com.
2. Surface Monitor Results To Date – Since monitoring of the top surface began (Jan 4, 2006), there has been no appreciable movement in the surface monuments at the Apex site. Significant decreases in elevation could have meant large volume changes within the impoundment due to either (1) consolidation of enclosed materials, or (2) loss of liquid through leaks in the impoundment.

There are ten monuments installed on the top surface. As shown, between installation of the monuments and the July 10, 2006 monitoring period any movements have been slight and can be attributed to surveying accuracy limitations. Surveying of the monuments will now take place on a quarterly basis, starting with September.

Monument	Total Elevation Change Since 1/4/06 (feet)
1	-0.01
2	0.02
3	0.00
4	0.05
5	0.04
6	0.02
7	-0.06
8	0.00
9	-0.01
10	0.02

## **Work Planned for Next Period**

1. Visual inspection of site.
2. Settlement monument survey – will take place quarterly basis - September.

## **Sampling and Analysis in Period**

### *Field Tests, Inspections & QA/QC*

1. The seventh site inspection was done on August 3rd; a copy of the inspection report is included in the Supplemental Attachments section.

## **Cost and Schedule**

Committed costs in July 2006 were approximately \$5,329. Total project to date committed is approximately \$1,239,000.



The cost report for July is attached. Current status of the deliverables listed in the RCRA 7003 order is as follows:

<b>Deliverable</b>	<b>Reference Paragraph</b>	<b>Due</b>	<b>Remarks</b>
Post warning signage around perimeter of site	57	15 days after effective date of order	Work completed on March 9, 2004
Begin implementation of closure plan	63	45 days after receipt of filing of order	Work started on February 23, 2004
Monthly progress reports	64	28 <sup>th</sup> day after close of month	Requirement in effect after order is filed.
Completion report	66	30 days after completion of all closure plan tasks	Construction completion report submitted on 3/13/2006. A follow-up report to be issued after end of monitoring period.

The update of the schedule milestones is on the following table:

<b>Milestone</b>	<b>Target</b>	<b>Actual</b>	<b>Remarks</b>
Issue bid package – Phase I (Sump Drains)	6/14/04	6/15/04	Portion of RFP materials issued at pre-bid on 6/14/04; remainder sent via courier
Issue RFP package – Phase III	6/24/04	6/24/04	
Award contract for Phase I	6/24/04	6/29/04	Date contract was shipped to Hughes
Pre-bid meeting – Phase III	7/19/04	7/19/04	
Start Phase I (Sump Drains) construction	7/12/04	7/19/04	
Start Phase II (Evaporation)	7/19/04	7/29/04	
Receive bids for Phase III	8/2/04	8/2/04	
Re-bid Phase III contract package	April 2005	4/27/05	Date bid package was sent to Hughes
Start Phase III construction	End of August 2005	8/29/05	Start of contractor mobilization
Complete Phase III construction	Dec 23rd 2005	12/23/05	Completion of contract scope of work
Issue Construction Completion Report	Week of 3/13/2006	3/13/06	

### **Supplemental Attachments**

1. August 3, 2006 long term monitoring inspection report, by D. Truman.
2. July Cost Report

# **Annual Site Inspection Summary Sheet - Apex Site - Pond 2**

**Hecla Mining Company - Long-Term Maintenance and Monitoring Plan**

## **Form 1 of 4 - Summary**

Date: <u>8-3-06</u>			
Inspector: <u>TPH</u>			
Cover System Component	Potential Problem	Allowable Limits	Limits Potentially Exceeded
Site Perimeter	Erosion or Fencing Issues	NA	NA
Cover System (outslopes, top, rock)	Subsidence	Minor: ponding < 1" some gulying / erosion	Yes <u>X</u> * No <u>  </u>
		Significant: see Table 2	Yes <u>  </u> * No <u>X</u>
	Embankment Slope Stability	excessive movement or surface cracks > than 1"	Yes <u>  </u> * No <u>X</u>
	Gulying	on top	depth > 1" Yes <u>  </u> * No <u>X</u>
		at embankment crest or on outslope	depth > 2" Yes <u>  </u> * No <u>X</u>
		w/in normal flow channel in diversion channel	no gulying allowed Yes <u>  </u> * No <u>X</u>
		w/in diversions at toe of impoundment outslope	no gulying allowed Yes <u>  </u> * No <u>X</u>
		in diversion channel at any other location	NA
	Erosion Protection Stability	rock subsiding or missing	Yes <u>  </u> * No <u>X</u>
	Seepage	no colored seepage allowed (red, blue, yellow w/ crystallization)	Yes <u>  </u> * No <u>X</u>
Runoff Control System	Diversion Channel	rock in place, channel not moving, fence stable	Yes <u>X</u> * No <u>  </u>
	Diversion Swales	rock in place, no silting in or head cutting	Yes <u>X</u> * No <u>  </u>
	Excessive silt build up at fence lines in diversion channel	allowed if not effecting cover system	Yes <u>  </u> * No <u>X</u>

\* Mark all areas of concern or requiring repairs on attached site map.

Annual Site Inspection - Apex Site - Pond 2

Hecla Mining Company - Long-Term Maintenance and Monitoring Plan

**Form 2 of 4 - Site Perimeter**

Inspection Date: <u>8-3-04</u>	
Inspector: <u>J. K. [Signature]</u>	
Visible Outlying Areas	
Observed Condition:	<u>No Change</u>
Observed Damage:	<u>None</u>
May require repair: Yes ___ * No <u>X</u>	
Property Boundary Fence and Gate (walk fence line)	
Observed Condition:	<u>Everything looks fine</u>
Observed Damage:	<u>None</u>
Potential Corrective Actions:	<u>None</u>
May require repair: Yes ___ * No <u>X</u>	
All Upgradient Areas (areas that drain onto property)	
Observed Condition:	<u>No change from last month</u>
Observed Damage:	<u>Some minor erosion</u>
May require repair: Yes ___ * No <u>X</u>	

\* Mark all areas of concern or requiring repairs on attached site map.

**Annual Site Inspection - Apex Site - Pond 2**

Hecla Mining Company - Long-Term Maintenance and Monitoring Plan

**Form 3 of 4 - Impoundment**

Inspection Date: <u>8-5-06</u>			
Inspector: <u>T. Roman</u>			
<b>Outslopes</b>			
Observed Performance:	Rock Cover Subsidence:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> * No <input type="checkbox"/>
	Excessive Slope Movement (failure):	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> * No <input type="checkbox"/>
	Gully Development: <u>(minor)</u>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	May require repair: Yes <input type="checkbox"/> * No <input type="checkbox"/>
	Observable Leachate (colored):	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> <u>? Salt</u>	May require repair: Yes <input checked="" type="checkbox"/> * No <input type="checkbox"/>
	Excessive Siltation (at slope toe):	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> * No <input type="checkbox"/>
Observed Damage:	<u>Some Salt was observed at several sites around the outslope (X)</u>		
Potential Corrective Actions:	<u>(X) Doug Gibbs onsite with Doug Truman Monday 8/7. Recent rains appear to have created areas of salt formations - from natural mineralization contained in site fill materials. PG - 8/8/06</u>		
<b>Top (top surface soils)</b>			
Observed Performance:	Cracking (>1" width):	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> * No <input checked="" type="checkbox"/>
	Settlement / Evidence of Ponding:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> * No <input checked="" type="checkbox"/>
	Erosion / Gullyng:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> * No <input checked="" type="checkbox"/>
Observed Damage:	<u>None</u>		
Potential Corrective Actions:	<u>None</u>		
<b>Erosion Protection Layer (rock)</b>			
Observed Performance:	Rock Staying in Place:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	May require repair: Yes <input type="checkbox"/> * No <input checked="" type="checkbox"/>
	Rock Subsiding:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> * No <input checked="" type="checkbox"/>
	Missing Rock:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> * No <input checked="" type="checkbox"/>
Observed Damage:	<u>None</u>		
Potential Corrective Actions:	<u>None</u>		

\* Mark all areas of concern or requiring repairs on attached site map.

### Annual Site Inspection - Apex Site - Pond 2

Hecla Mining Company - Long-Term Maintenance and Monitoring Plan

### Form 4 of 4 - Diversion Channel and Swales

Date: <u>8-3-06</u>			
Inspector: <u>T. P. M. M.</u>			
<b>Diversion Channel</b>			
Observed Performance:	Erosion Protection in place:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	May require repair: Yes <input type="checkbox"/> * No <input checked="" type="checkbox"/>
	Normal Flow Channel in place:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	May require repair: Yes <input type="checkbox"/> * No <input checked="" type="checkbox"/>
	Encroaching on Site Fencing:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> * No <input checked="" type="checkbox"/>
Observed Damage: <u>None</u>			
Potential Corrective Actions: <u>None</u>			
<b>Diversion Swales</b>			
Observed Performance:	Erosion Protection in place:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	May require repair: Yes <input type="checkbox"/> * No <input checked="" type="checkbox"/>
	Flow Channel Silting In:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> * No <input checked="" type="checkbox"/>
	Head Cutting:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> * No <input checked="" type="checkbox"/>
Observed Damage: <u>None</u>			
Potential Corrective Actions: <u>None</u>			

\* Mark all areas of concern or requiring repairs on attached site map.

Activity	2004 Budget	Revised Budget May 2004	Committed Cost this Period	Cumulative Committed Cost To Date 7-31-06	Forecasted Cost To Complete	Forecasted Final Cost	Remarks on Forecast to Complete
<b>Phases I through III (Completed February 2006)</b>							
Phase I - Drain Excess Liquid From Tailings	189,200	72,700		67,928	0	67,928	
Phases II, IIA + IIB - Evaporate Excess Liquid	6,000	8,000		242,882	0	242,882	
Phase III - Regrading & Final Cover System	337,000	342,050		504,742	0	504,742	
Field Indirect Costs	164,500	213,568		378,517	0	378,517	Includes Jan + Feb 2006 long term monitoring costs
Hecia Costs	18,700	18,700	0	33,324	0	33,324	
<b>Subtotal Phases I through III</b>	<b>715,400</b>	<b>655,018</b>	<b>0</b>	<b>1,227,393</b>	<b>0</b>	<b>1,227,393</b>	
<b>Long Term Monitoring (through FY 2010)</b>							
Site Inspections			177	570	4,115	4,685	
Settlement Monitoring			0	2,025	8,100	10,125	
<b>Consultant Support:</b>							
Annual Geotechnical Engineer Inspections			0	2,495	18,100	20,595	Includes settlement monitoring data analysis
Vegetation Monitoring				0	20,000	20,000	Allowance for surveys in FY 2007, 2009 and 2010
Site Conditions Review - MEI			3,161	3,161			
Site Conditions Review - SVL Analytical			891	891			
<b>Maintenance:</b>							
Erosion Repair Allowance				0	7,500	7,500	
Overseeding Allowance				0	9,920	9,920	
<b>Hecia Project Management Costs:</b>							
Labor			500	2,086	8,109	10,175	
Travel expenses			600	600	1,312	1,912	
<b>Subtotal Long Term Monitoring</b>	<b>0</b>	<b>0</b>	<b>5,329</b>	<b>11,808</b>	<b>77,156</b>	<b>84,912</b>	
<b>Total Pond 2 Final Closure</b>	<b>715,400</b>	<b>655,018</b>	<b>5,329</b>	<b>1,239,201</b>	<b>77,156</b>	<b>1,312,305</b>	

Fw: Apex - July 2006  
Eric Johnson to: Amy Swanson

08/17/2006 07:30 AM

----- Forwarded by Eric Johnson/ENF/R8/USEPA/US on 08/17/2006 07:30 AM -----



Paul Glader  
<pglader@hecla-mining.com>

08/16/2006 12:17 PM

To Eric Johnson/ENF/R8/USEPA/US@EPA

cc

Subject: Apex - July 2006



Apex.Pond 2 - progress rpt 27 complete, july 2006.pdf





August 16, 2006

Sent via email

Eric Johnson  
U.S. Environmental Protection Agency  
Region 8, 8ENF-T  
999 18<sup>th</sup> Street, Suite 300  
Denver, Colorado 80202-2466

RE: Progress report for July 2006 activities - Hecla Mining Company Apex Site (EPA ID No. UT982589848, Docket No. RCRA-8-99-06)

Dear Mr. Johnson:

Per paragraph 64 of the Order, enclosed is a copy of the July 2006 progress report for your records.

If you have any questions please do not hesitate to call me at (208) 769-4112 or e-mail at [pglader@hecla-mining.com](mailto:pglader@hecla-mining.com).

Sincerely,

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Paul L. Glader  
Manager Environmental Services

End

Cc: HMC Legal Dept (w/o attachments)  
John Jacus, Esq. (DG&S)



August 16, 2006

Sent via U.S. Mail

Glenn Rogers, Chairman.  
Shivwits Band of Paiute Indian Tribe  
P.O. Box 448  
Santa Clara, Utah 84765

John Krause  
Bureau of Indian Affairs Phoenix Area Office  
U.S. Department of Interior  
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Phoenix, AZ 85001

Kelly Youngbear  
BIA Southern Paiute Agency  
P.O. Box 720  
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Encl

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John Jacus, Esq. (DG&S) (w/o attachments)  
Eric Johnson (USEPA, Region VIII) (w/o attachments)



August 16, 2006

**MEMORANDUM TO:** Apex File  
**COPIES TO:** distribution  
**FROM:** Paul Glader *PG*  
**SUBJECT:** Progress Report No. 27 for period ending July 31, 2006;  
Pond 2 Final Closure - Apex Site, Washington County, Utah

**Summary**

The seventh visual inspection, per the long term monitoring plan, was conducted on August 3rd. No unusual conditions were noted, some salt formation was noted near the toe of the rock-armored out slopes. Further investigation identified the source as recent rainfall contacting the natural mineralization contained in the site-sourced construction material. Some minor erosion maintenance will be scheduled for late summer.

The settlement monuments were surveyed on June 6th and July 10th - no appreciable settlement has been noted. Settlement analysis will now take place on a quarterly basis.

## **Major Issues**

1. During the period of post closure long term monitoring, the Hecla representative will be Paul Glader, Manager of Environmental Services. Paul's contact information includes: Work Telephone - 208.769.4112, email address – pglader@hecla-mining.com.
2. Surface Monitor Results To Date – Since monitoring of the top surface began (Jan 4, 2006), there has been no appreciable movement in the surface monuments at the Apex site. Significant decreases in elevation could have meant large volume changes within the impoundment due to either (1) consolidation of enclosed materials, or (2) loss of liquid through leaks in the impoundment.

There are ten monuments installed on the top surface. As shown, between installation of the monuments and the July 10, 2006 monitoring period any movements have been slight and can be attributed to surveying accuracy limitations. Surveying of the monuments will now take place on a quarterly basis, starting with September.

Monument	Total Elevation Change Since 1/4/06 (feet)
1	-0.01
2	0.02
3	0.00
4	0.05
5	0.04
6	0.02
7	-0.06
8	0.00
9	-0.01
10	0.02

## **Work Planned for Next Period**

1. Visual inspection of site.
2. Settlement monument survey – will take place quarterly basis - September.

## **Sampling and Analysis in Period**

### *Field Tests, Inspections & QA/QC*

1. The seventh site inspection was done on August 3rd; a copy of the inspection report is included in the Supplemental Attachments section.

## **Cost and Schedule**

Committed costs in July 2006 were approximately \$5,329. Total project to date committed is approximately \$1,239,000.

The cost report for July is attached. Current status of the deliverables listed in the RCRA 7003 order is as follows:

<b>Deliverable</b>	<b>Reference Paragraph</b>	<b>Due</b>	<b>Remarks</b>
Post warning signage around perimeter of site	57	15 days after effective date of order	Work completed on March 9, 2004
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Monthly progress reports	64	28 <sup>th</sup> day after close of month	Requirement in effect after order is filed.
Completion report	66	30 days after completion of all closure plan tasks	Construction completion report submitted on 3/13/2006. A follow-up report to be issued after end of monitoring period.

The update of the schedule milestones is on the following table:

<b>Milestone</b>	<b>Target</b>	<b>Actual</b>	<b>Remarks</b>
Issue bid package – Phase I (Sump Drains)	6/14/04	6/15/04	Portion of RFP materials issued at pre-bid on 6/14/04; remainder sent via courier
Issue RFP package – Phase III	6/24/04	6/24/04	
Award contract for Phase I	6/24/04	6/29/04	Date contract was shipped to Hughes
Pre-bid meeting – Phase III	7/19/04	7/19/04	
Start Phase I (Sump Drains) construction	7/12/04	7/19/04	
Start Phase II (Evaporation)	7/19/04	7/29/04	
Receive bids for Phase III	8/2/04	8/2/04	
Re-bid Phase III contract package	April 2005	4/27/05	Date bid package was sent to Hughes
Start Phase III construction	End of August 2005	8/29/05	Start of contractor mobilization
Complete Phase III construction	Dec 23rd 2005	12/23/05	Completion of contract scope of work
Issue Construction Completion Report	Week of 3/13/2006	3/13/06	

### **Supplemental Attachments**

1. August 3, 2006 long term monitoring inspection report, by D. Truman.
2. July Cost Report

# Annual Site Inspection Summary Sheet - Apex Site - Pond 2

Hecla Mining Company - Long-Term Maintenance and Monitoring Plan

## Form 1 of 4 - Summary

Date: <u>8-3-06</u>			
Inspector: <u>TRUMAN</u>			
Cover System Component	Potential Problem	Allowable Limits	Limits Potentially Exceeded
Site Perimeter	Erosion or Fencing Issues	NA	NA
Cover System (outslopes, top, rock)	Subsidence	Minor: ponding < 1" some gullyng / erosion	Yes <u>M</u> * No <u>   </u>
		Significant: see Table 2	Yes <u>   </u> * No <u>X</u>
	Embankment Slope Stability	excessive movement or surface cracks > than 1"	Yes <u>   </u> * No <u>Y</u>
	Gullyng	on top	depth > 1" Yes <u>   </u> * No <u>Y</u>
		at embankment crest or on outslope	depth > 2" Yes <u>   </u> * No <u>X</u>
		w/in normal flow channel in diversion channel	no gullyng allowed Yes <u>   </u> * No <u>Y</u>
		w/in diversions at toe of impoundment outslope	no gullyng allowed Yes <u>   </u> * No <u>Y</u>
		in diversion channel at any other location	NA NA
	Erosion Protection Stability	rock subsiding or missing	Yes <u>   </u> * No <u>X</u>
	Seepage	no colored seepage allowed (red, blue, yellow w/ crystallization)	Yes <u>   </u> * No <u>Y</u>
Runoff Control System	Diversion Channel	rock in place, channel not moving, fence stable	Yes <u>X</u> * No <u>   </u>
	Diversion Swales	rock in place, no silting in or head cutting	Yes <u>X</u> * No <u>   </u>
	Excessive silt build up at fence lines in diversion channel	allowed if not effecting cover system	Yes <u>   </u> * No <u>Y</u>

\* Mark all areas of concern or requiring repairs on attached site map.

# Annual Site Inspection - Apex Site - Pond 2

Hecla Mining Company - Long-Term Maintenance and Monitoring Plan

## **Form 2 of 4 - Site Perimeter**

Inspection Date: <u>8-3-04</u>	
Inspector: <u>T. Thomas</u>	
<b>Visible Outlying Areas</b>	
Observed Condition:	<u>No Change</u>
Observed Damage:	<u>None</u>
May require repair: Yes <input type="checkbox"/> * No <input checked="" type="checkbox"/>	
<b>Property Boundary Fence and Gate (walk fence line)</b>	
Observed Condition:	<u>Everything looks fine</u>
Observed Damage:	<u>None</u>
Potential Corrective Actions:	<u>None</u>
May require repair: Yes <input type="checkbox"/> * No <input checked="" type="checkbox"/>	
<b>All Upgradient Areas (areas that drain onto property)</b>	
Observed Condition:	<u>No change from last month</u>
Observed Damage:	<u>Some minor erosion</u>
May require repair: Yes <input type="checkbox"/> * No <input checked="" type="checkbox"/>	

\* Mark all areas of concern or requiring repairs on attached site map.



**Annual Site Inspection - Apex Site - Pond 2**

Hecla Mining Company - Long-Term Maintenance and Monitoring Plan

**Form 3 of 4 - Impoundment**

Inspection Date: <u>8-5-06</u>			
Inspector: <u>T. Roman</u>			
<b>Ouslopes</b>			
Observed Performance:	Rock Cover Subsidence:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> No <input type="checkbox"/>
	Excessive Slope Movement (failure):	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> No <input type="checkbox"/>
	Gully Development: (MINOR)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	May require repair: Yes <input type="checkbox"/> No <input type="checkbox"/>
	Observable Leachate (colored):	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> ? Salt	May require repair: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
	Excessive Siltation (at slope toe):	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> No <input type="checkbox"/>
Observed Damage:	Some Salt was observed at several site around the outslope (X)		
Potential Corrective Actions:	(X) Doug Gibbs onsite with Doug Truman Monday 8/7. Recent rains appear to have created areas of salt formations - from natural mineralization contained in site fill materials. PG-8/8/06		
<b>Top (top surface soils)</b>			
Observed Performance:	Cracking (>1" width):	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
	Settlement / Evidence of Ponding:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
	Erosion / Gullyng:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Observed Damage:	None		
Potential Corrective Actions:	None		
<b>Erosion Protection Layer (rock)</b>			
Observed Performance:	Rock Staying in Place:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	May require repair: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
	Rock Subsiding:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
	Missing Rock:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Observed Damage:	None		
Potential Corrective Actions:	None		

\* Mark all areas of concern or requiring repairs on attached site map.

**Annual Site Inspection - Apex Site - Pond 2**

**Hecia Mining Company - Long-Term Maintenance and Monitoring Plan**

**Form 4 of 4 - Diversion Channel and Swales**

Date: <u>8-3-06</u>			
Inspector: <u>[Signature]</u>			
<b>Diversion Channel</b>			
Observed Performance:	Erosion Protection in place:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	May require repair: Yes <input type="checkbox"/> * No <input checked="" type="checkbox"/>
	Normal Flow Channel in place:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	May require repair: Yes <input type="checkbox"/> * No <input checked="" type="checkbox"/>
	Encroaching on Site Fencing:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> * No <input checked="" type="checkbox"/>
Observed Damage: <u>None</u>			
Potential Corrective Actions: <u>None</u>			
<b>Diversion Swales</b>			
Observed Performance:	Erosion Protection in place:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	May require repair: Yes <input type="checkbox"/> * No <input checked="" type="checkbox"/>
	Flow Channel Silting In:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> * No <input checked="" type="checkbox"/>
	Head Cutting:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> * No <input checked="" type="checkbox"/>
Observed Damage: <u>None</u>			
Potential Corrective Actions: <u>None</u>			

\* Mark all areas of concern or requiring repairs on attached site map.

Activity	2004 Budget	Revised Budget May 2004	Committed Cost this Period	Cumulative Committed Cost To Date 7-31-06	Forecasted Cost To Complete	Forecasted Final Cost	Remarks on Forecast to Complete
<b>Phases I through III (Completed February 2006)</b>							
Phase I - Drain Excess Liquid From Tailings	189,200	72,700		67,928	0	67,928	
Phases II, IIA + IIB - Evaporate Excess Liquid	6,000	8,000		242,882	0	242,882	
Phase III - Regrading & Final Cover System	337,000	342,050		504,742	0	504,742	
Field Indirect Costs	164,500	213,568		378,517	0	378,517	Includes Jan + Feb 2006 long term monitoring costs
Hecla Costs	18,700	18,700	0	33,324	0	33,324	
<b>Subtotal Phases I through III</b>	<b>715,400</b>	<b>655,018</b>	<b>0</b>	<b>1,227,393</b>	<b>0</b>	<b>1,227,393</b>	
<b>Long Term Monitoring (through FY 2010)</b>							
Site Inspections			177	570	4,115	4,685	
Settlement Monitoring			0	2,025	8,100	10,125	
<u>Consultant Support:</u>							
• Annual Geotechnical Engineer Inspections			0	2,495	18,100	20,595	Includes settlement monitoring data analysis
Vegetation Monitoring				0	20,000	20,000	Allowance for surveys in FY 2007, 2009 and 2010
Site Conditions Review - MEI			3,161	3,161			
Site Conditions Review - SVL Analytical			891	891			
<u>Maintenance:</u>							
Erosion Repair Allowance				0	7,500	7,500	
Overseeding Allowance				0	9,920	9,920	
<u>Hecla Project Management Costs:</u>							
Labor			500	2,066	8,109	10,175	
Travel expenses			600	600	1,312	1,912	
<b>Subtotal Long Term Monitoring</b>	<b>0</b>	<b>0</b>	<b>5,329</b>	<b>11,808</b>	<b>77,156</b>	<b>84,912</b>	
<b>Total Pond 2 Final Closure</b>	<b>715,400</b>	<b>655,018</b>	<b>5,329</b>	<b>1,239,201</b>	<b>77,156</b>	<b>1,312,305</b>	